What is claimed is:

**1.** An implanted device-implemented method of detecting and monitoring congestive heart failure in a patient, which comprises the steps of:

performing ongoing measurements of changes in local impedance of a portion of the patient's body between at least two electrodes on the exterior of the implanted device, said changes representing ventilation of the patient, including

measuring the patient's respiratory rate and respiratory amplitude.

**2.** The implanted device-implemented method of claim **1**, including:

controlling the rate of a rate adaptive cardiac pacemaker, using the patient's ventilation represented by the measured changes in local impedance.

**3.** The implanted device-implemented method of claim **1**, including:

detecting the cardiopulmonary status of the patient, using the patient's ventilation represented by the measured changes in local impedance.

**4.** The implanted device-implemented method of claim **1**, including:

deriving a signal from the measured changes in local impedance that reflects congestion in heart failure patients.

**5.** The implanted device-implemented method of claim **1**, including:

deriving both the patient's ventilation and DC impedance from the measured changes in local impedance, from which to detect an early stage of lung congestion of the patient.

**6.** A method of early detection of pulmonary congestion in a patient, comprising:

subcutaneously implanting an impedance monitoring device at a location on the patient's thorax at the lower part of the lungs constituting a site where initial accumulation of fluid occurs in the lungs, and

monitoring impedance changes at said location to detect pulmonary congestion.

**7.** A method of monitoring the cardiopulmonary status of a patient, comprising:

detecting the patient's intrinsic heart activity,

analyzing and storing the analysis of the detected intrinsic heart activity,

evaluating a pattern of the patient's intrinsic heart activity derived from said analysis, and

measuring and evaluating impedance at a selected site on the patient's body, and using said impedance evaluation together with said intrinsic heart activity pattern evaluation to derive information representing the cardiopulmonary status of the patient.

**8.** A method of detecting pulmonary congestion in a patient, comprising:

implanting a subcutaneous impedance measuring device with electrodes connected thereto, and

positioning said electrodes to measure impedance on the lower left side of the patient's lungs.

**9.** A body-implantable device adapted to detect and monitor congestive heart failure in a patient, comprising a circuit module coupled to plural surface electrodes of the device arranged and adapted, when the device is implanted, for contacting tissue in a portion of the patient's body generally occupied by the lungs, to monitor changes in local impedance of said body portion, and to detect the patient's EKG.

**10.** The body-implantable device of claim **9**, wherein said circuit module utilizes at least two of said electrodes to both monitor said changes in local impedance and detect the patient's EKG.

**11.** The body-implantable device of claim **9**, wherein said circuit module includes an accelerometer within said device.

**12.** The body-implantable device of claim **9**, wherein said device is adapted to be implanted subcutaneously.

**13.** The body-implantable device of claim **9**, wherein said circuit module includes a patient alert function.

**14.** The body-implantable device of claim **9**, wherein said circuit module includes means for telemetry communication with one or more control units external to the patient's body.

**15.** A body-implantable device, comprising apparatus for measuring a patient's subcutaneous impedance at a location on the patient's body where the measured impedance has a linear correlation with the patient's cardiac output, and for monitoring a decrease in impedance baseline value to indicate cardiopulmonary status of the patient.

**16.** A medical device adapted for subcutaneous implant in a patient to monitor cardiopulmonary status of the patient, comprising:

a first subsystem to detect the patient's intrinsic heart activity,

a second subsystem to analyze and store the intrinsic heart activity,

a third subsystem to evaluate a physical activity pattern of the patient generated by a mechanical-electrical converter,

a fourth subsystem to analyze and store the physical activity pattern,

a fifth subsystem to measure and evaluate impedance at a local implant site of said device, and

a sixth subsystem to analyze and store said impedance, and to derive from the functions of the first, second, third, fourth, fifth and sixth subsystems information representing the cardio-pulmonary status of the patient.

**17.** A medical device adapted for subcutaneous implant in a patient to evaluate cardiopulmonary status of the patient, comprising:

detection apparatus responsive to the heart rate/activity pattern of the patient and the impedance between a pair of electrodes contacting subcutaneous tissue at opposite sides of a lung of the patient, for performing said evaluation, and

evaluation apparatus for evaluating the trend of said heart rate/activity pattern and said impedance against one another, over a selected period of time.

**18.** A device adapted to be implanted in a patient, comprising:

a housing for said device,

said device having electrodes on a surface of said housing constituting the only electrodes of said device, for detecting local impedance changes therebetween and locally derived EKG after said device is implanted in the patient, and

said housing incorporating a mechano-electrical converting element therein for responding to the status of physical activity of the patient.

**19.** The device of claim **18**, including an electronic module in said housing to determine from information derived from said impedance changes, said EKG and said status of physical activity, the status of congestive heart failure of the patient.

**20.** The device of claim **18**, including an electronic module in said housing to determine from information derived from said impedance changes, said EKG and said status of physical activity, the need for increasing or decreasing the heart rate of the patient.

**21.** The device of claim **18**, including an electronic module in said housing to determine from information derived from said impedance changes, said EKG and said status of physical activity, the occurrence of potentially lethal arrhythmias of the patient.

**22.** The device of claim **18**, wherein said mechano-electrical converting element is an accelerometer.

**23.** In a rate adaptive cardiac pacemaker adapted to be implanted in a patient's body, an improvement comprising:

electrodes situated on one of a housing and a header of the pacemaker, and

an electronic module for measuring impedance changes at said electrodes when the pacemaker is implanted, to control the pacing rate generated by the pacemaker.

**24.** The device of claim **23**, including

an accelerometer for detecting status of physical activity of the patient to assist in adjusting the pacing rate of the pacemaker.